

*REMARKS/ARGUMENTS**The Pending Claims*

Claims 1-30 currently are pending. The pending claims are directed to fumed metal oxide particles and a process for producing the same. Reconsideration of the claims is respectfully requested in view of the remarks herein.

Summary of Examiner Interview

Applicants thank Examiner Paul A. Wartalowicz for the courtesies extended to Applicants' representatives John Kilyk, Jr. and Sheldon B. Davis during the personal interview held on March 11, 2009. This Supplemental Reply to Office Action conforms to the discussion at the personal interview. In particular, the accompanying Rule 132 Declaration by Sheldon B. Davis substantially sets forth the information provided by Applicants' representatives to the Examiner during the course of the personal interview.

At the personal interview, the Examiner suggested that (a) Applicants remove the apparatus-type language from the pending process claims and (b) Applicants provide a Rule 132 Declaration by a non-inventor confirming the arguments and comments provided by Applicants' representatives. By way of this Supplemental Reply to Office Action, Applicants are complying with the Examiner's suggestions.

Discussion of Claim Amendments

Claim 1 has been amended to remove the features of a preferred apparatus in accordance with the Examiner's suggestion during the aforementioned Examiner interview. No new matter has been added by way of the claim amendments.

Summary of the Office Action

The Office Action rejects the pending claims on obviousness grounds in view of U.S. Patent 5,340,560 (Rohr et al.) in view of U.S. Patent 5,256,389 (Jordan et al.), U.S. Patent 6,312,656 (Blackwell et al.), U.S. Patent 5,904,762 (Mahmud et al.), U.S. Patent 4,822,410

(Matovich), U.S. Patent 5,075,090 (Lewis et al.), U.S. Patent 6,565,823 (Hawtof et al.), and U.S. Patent 4,857,076 (Pearson et al.),

Discussion of the Obviousness Rejections

As discussed in Applicants' "Reply to Office Action" dated January 26, 2009, and during the aforementioned Examiner Interview of March 11, 2009, pending process claims 1-24, as amended, recite that the liquid feedstock is injected into the stream of combustion gas (a) which is formed from the combustion of the oxidant and liquid or gaseous fuel in the combustion chamber of the reactor and (b) while the stream of combustion gas is flowing through a constricted outlet portion of the reactor. The stream of combustion gas atomizes the liquid feedstock, and the stream of combustion gas subjects the atomized liquid feedstock to a sufficient temperature and residence time in the stream of combustion gas for the liquid feedstock to combust or pyrolyze and thereby be converted to fumed metal oxide particles. Pending product claims 25-30 recite a product resulting from the claimed process.

The Office Action primarily relies on the Rohr '560 patent, which discloses a conventional process for preparing fumed silica. The Rohr '560 patent does not disclose or suggest the injection of liquid feedstock, let alone into the stream of combustion gas formed from the combustion of the oxidant and liquid or gaseous fuel so as to atomize and combust or pyrolyze the liquid feedstock to form fumed metal oxide particles. The other cited references, namely the Jordan '389 patent, the Blackwell '656 patent, the Mahmud '762 patent, the Matovich '410 patent, the Lewis '090 patent, the Hawtof '823 patent, and the Pearson '076 patent, do not cure the deficiencies of the Rohr '560 patent. Indeed, these other cited references do not even pertain to the production of fumed metal oxide particles.

To further assist the Examiner in considering the present invention as defined by the pending claims vis-à-vis the cited references, Applicants submit herewith two Declarations Under 37 C.F.R. § 1.132: (1) the Rule 132 Declaration of Sheldon B. Davis (who attended the Examiner Interview of March 11, 2009) and (2) the Rule 132 Declaration of Gael D. Ulrich. Consistent with the desire expressed by the Examiner during the course of the Examiner Interview, neither of the Rule 132 declarants, i.e., neither Dr. Davis nor Dr. Ulrich, is a named inventor on the present application, although both declarants have considerable

experience with respect to the production of fumed metal oxide particles as well as other types of particles. The educational and employment backgrounds of Dr. Davis and Dr. Ulrich are set forth in their respective Rule 132 Declarations.

The Rule 132 Declaration of Sheldon B. Davis describes the differences between fumed metal oxide particles and other types of particles and expresses the view that none of the cited references would have provided a reason for an ordinary worker in the field to take the conventional process for preparing fumed metal oxide particles as described in the Rohr '560 patent, and modify it to provide the present inventive method with any expectation of success in continuing to satisfactorily produce fumed metal oxide particles. Thus, the Rule 132 Declaration of Sheldon B. Davis reflects the discussion by Dr. Davis during the Examiner Interview of March 11, 2009.


The Rule 132 Declaration of Gael D. Ulrich similarly describes the differences between fumed metal oxide particles and the particles described in the cited references. Dr. Ulrich, who has over 40 years of experience with processes such as described in the cited references, explains in detail why one of ordinary skill in the art would not have considered using the process features disclosed in the Jordan '389 patent, the Blackwell '656 patent, the Mahmud '762 patent, the Matovich '410 patent, the Lewis '090 patent, the Hawtof '823 patent, or the Pearson '076 patent to modify the process for preparing fumed metal oxide particles as disclosed in the Rohr '560 patent, so as to thereby provide the present inventive process, with any reasonable expectation of continuing to successfully prepare fumed metal oxide particles.

For the reasons previously provided by Applicants, as well as the reasons set forth in the accompanying Rule 132 Declarations of Dr. Davis and Dr. Ulrich, Applicants respectfully submit that the combination of the cited references fails to render obvious the present invention as defined by the pending claims in the absence of any improper hindsight knowledge of the present invention. Accordingly, the obviousness rejections based on various combinations of the cited references should be withdrawn.

Conclusion

Applicants respectfully submit that the patent application is in condition for allowance. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



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